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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/393,647 09/10/99 WOLTER

H 060953/0122

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IM22/0504

EXAMINER

FORTUNA, A

ART UNIT

PAPER NUMBER

1723

DATE MAILED:

05/04/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/393,647

Applicant(s)

Wolter et al.

Examiner

Ana Fortuna

Art Unit

1723

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Feb 13, 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 5-19 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- *See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☐ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____
- 18) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other:

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DETAILED ACTION

1. Claims 1-3, 5-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 1, page 6 (amendment of 2/13/2001), lines 5-6, the term "preferably" is indefinite as to what range is intended, on the same page, step (v), the term "shown represented" is redundant" and unclear as to what is intended.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-3, 5-7, 11-14, 15-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Scholze et al. (4,238,590). Reference '490 discloses a membrane made from the polycondensate formula claimed (column 1, lines 57-68, column 2-55), which can result in formula III, IV, or V of the claimed invention. Mixtures of all the compounds of the claimed formulas in the membrane is not disclosed. Regarding claim 2 polycondensation in presence of a catalyst is disclosed (column 4, lines 52-65). The membrane is pore and is suitable for filtration of aqueous solutions. Regarding claim 11, the compound having at least one amino group, e.g. by the addition of the catalyst is also disclosed (column 4, lines 52-54). The product derived from a hydrolyzable silicic acid derivative is disclosed (abstract). ^{SALT} ~~Salt~~ addition, e.g. sodium

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hydroxide is also disclosed (column 4, lines 52-65), therefore, the presence of the salt is expected to form the pores in the membrane. Heat treatment is disclosed by '590 (column 5, lines 25-50). The limitations of claim 17 is discloses (column 7, lines 16-45). The membrane formed on a support is also is disclosed (column 6, lines 14-38). It would have been obvious to one skilled in the pertinent art to select conventional supports having flat or tubular shape, as support for the silane derived membrane.

4. Claims 1-2, 6, 15, 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Scholze et al.(4,374,933). Reference '933 discloses a porous membrane made from silicic acid heteropolycondensates of the claimed formula, in presence of a catalyst, and is use in separation of aqueous or gaseous medium (columns 1-8, and column 9, lines 1-15). The membrane made from mixtures of more than one of the claimed formulas and the formulas detailed in the way as claimed in the present invention is not disclosed, but the formula and compound disclosed in '933 correspond to at least one o the claimed formulas when substituting the different groups in the general formula. The specie of at least the compound of the formula III is disclosed by the prior art of record discussed above, the species of remaining formulas and or condensate, with or without the optional groups are considered as equivalents.

Evidence of Markush group is that members are equivalents

Markush group of "...acid". By the representation of this Markush group, appellant has made the representation that for the purpose of the claimed invention, the elements of the group are

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equivalents. Having made this representation, appellants may not now argue that these two elements are not equivalents. In re Skoll, 187 USPQ 481 (CCPA 1975).

4. Response to arguments: the rejection of paper No.6 is repeated above now including the new added claims 18-19. In response to arguments on page 11, 3-4 paragraphs, applicant states that reference '590 and '933 do not disclose or suggest the use of functional silane compounds which are able to undergo "organic polymerization", but inorganic condensation. Reference '590 discloses polycondensation up to a degree of polymerization corresponding to about 10 monomer units (column 5, lines 20-24), furthermore, the term polycondensation and polymerization are known as equivalents in the art. The membrane in reference '590 is produced by at least one embodiment of the claimed formula III, e.g substitute silane of formula II (column 2, line 7). In reference '490 the double bond is represented by the alkylene group R'', X is represented by R (halogen), and b=0, c=0, other additional groups can be represented by the R''. The condensate of the formula V is also disclosed g. For R'' equal to amino group and R equal to halogen. The drying and curing and the use of catalyst in the polycondensation or polymerization process is also disclosed, therefore, since the same and or equivalent silane compounds are disclosed, and the step of making the membrane are the same, although all the structure and embodiments of claim 1 are not disclosed, as discussed above, only one specie is necessary to be taught by the prior art.

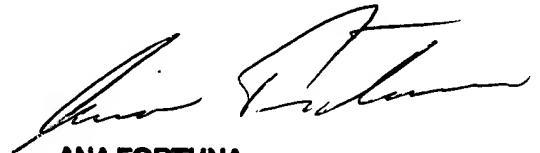
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ana Fortuna whose telephone number is (703) 308-3857.

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Facsimile No. (703)-305-7718.

A handwritten signature in black ink, appearing to read 'Ana Fortuna', written in a cursive style.

ANA FORTUNA
PRIMARY EXAMINER

Ana Fortuna

May 3, 2001